



TXU Energy  
Comanche Peak Steam  
Electric Station  
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C. Lance Terry  
Senior Vice President &  
Principal Nuclear Officer

Ref: 10CFR50.73(a)(2)(iv)(A)

CPSES-200301531  
Log # TXX-03122  
File # 10010

September 5, 2003

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)  
DOCKET NO. 50-446  
ACTUATION OF REACTOR PROTECTION SYSTEM  
LICENSEE EVENT REPORT 446/03-001-00

Gentlemen:

Enclosed is Licensee Event Report (LER) 03-001-00 for Comanche Peak Steam Electric Station Unit 2, " Reactor Trip Due To Loss of Reactor Coolant Pump."

This communication contains no new licensing basis commitments regarding CPSES Units 1 and 2.

IE22

TXX-03122

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Sincerely,

TXU Generation Company LP

By: TXU Generation Management Company LLC,  
Its General Partner

C. L. Terry  
Senior Vice President and Principal Nuclear Officer

By: Roger D. Walker  
Roger D. Walker  
Regulatory Affairs Manager

GLM/gm

Enclosures

c - T. P. Gwynn, Region IV  
W. D. Johnson, Region IV  
M. C. Thadani, NRR  
Resident Inspectors, CPSES

NRC FORM 366 (7-2001)		U.S. NUCLEAR REGULATORY COMMISSION		APPROVED BY OMB NO. 3150-0104 EXPIRES 07/31/2004																																																																																																								
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<p>On July 9, 2003, Comanche Peak Steam Electric Station (CPSES) Unit 2 was in Mode 1, Power Operation, operating at 100% power. At 0109 hours, the 2-04 Reactor Coolant Pump (RCP) motor breaker opened which resulted in loss of the 2-04 RCP and an automatic reactor trip. All control rods fully inserted and all Auxiliary Feedwater pumps automatically started as expected.</p> <p>TXU Generation Company LP's (TXU Energy) evaluation of this event has determined that the 2-04 RCP motor breaker opened due to a "B" phase stator to ground short in the 2-04 RCP motor. Corrective actions include repair of the 2-04 RCP motor stator and, as previously discussed in Licensee Event Report 03-002-00 for CPSES Unit 1, an evaluation of the Predictive Analysis Program specifically for large electric motors will be performed to assess the current program scope, monitoring practices, and overall effectiveness.</p> <p>All times in this report are approximate and Central Daylight Time unless noted otherwise.</p>																																																																																																												

**LICENSEE EVENT REPORT (LER)**

Facility Name (1)	DocId	LER Number (6)			Page(s)
		Year	Sequential Number	Revision Number	
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2	05000446	03	001	00	2 OF 4

NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

**I. DESCRIPTION OF REPORTABLE EVENT****A. REPORTABLE EVENT CLASSIFICATION**

Any event or condition that resulted in manual or automatic actuation of the Reactor Protection System (RPS) including reactor trip or reactor scram.

**B. PLANT OPERATING CONDITIONS PRIOR TO THE EVENT**

On July 9, 2003, Comanche Peak Steam Electric Station (CPSES) Unit 2 was in Mode 1, Power Operation, operating at 100 percent power.

**C. STATUS OF STRUCTURES, SYSTEMS, OR COMPONENTS THAT WERE INOPERABLE AT THE START OF THE EVENT AND THAT CONTRIBUTED TO THE EVENT**

There were no inoperable structures, systems, or components that contributed to the event.

**D. NARRATIVE SUMMARY OF THE EVENT, INCLUDING DATES AND APPROXIMATE TIMES**

On July 9, 2003, Comanche Peak Steam Electric Station (CPSES) Unit 2 was in Mode 1, Power Operation, operating at 100% power. At 0109 hours, the 2-04 Reactor Coolant Pump (RCP) motor breaker [EIS: (AB)(P)(MO)(BKR)] unexpectedly opened which resulted in loss of the 2-04 RCP. Operators (utility, licensed) in the Unit 2 Control Room received a "Rx > 48 percent 1 of 4 loop flow low trip" alarm which resulted in an automatic reactor trip. All control rods fully inserted, all Auxiliary Feedwater pumps [EIS: (BA)(P)] automatically started as expected, and the unit was stabilized in Mode 3.

**E. THE METHOD OF DISCOVERY OF EACH COMPONENT OR SYSTEM FAILURE, OR PROCEDURAL OR PERSONNEL ERROR**

Operators (utility, licensed) in the Unit 2 Control Room received a "Rx > 48 percent 1 of 4 loop flow low trip" alarm.

**LICENSEE EVENT REPORT (LER)**

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03		001		00	

NARRATIVE (If more space is required, use additional copies of NRC Form 364A) (17)

**II. COMPONENT OR SYSTEM FAILURES****A. FAILURE MODE, MECHANISM, AND EFFECTS OF EACH FAILED COMPONENT**

TXU Energy's evaluation of this event determined that a "B" phase stator to ground short occurred in the 2-04 RCP motor.

**B. CAUSE OF EACH COMPONENT OR SYSTEM FAILURE**

The "B" phase stator to ground short occurred in the 2-04 RCP motor due to degradation of the stator ground wall insulation.

**C. SYSTEMS OR SECONDARY FUNCTIONS THAT WERE AFFECTED BY FAILURE OF COMPONENTS WITH MULTIPLE FUNCTIONS**

Not applicable – No failures of components with multiple functions were identified.

**D. FAILED COMPONENT INFORMATION**

Westinghouse S/N 89P969  
Model #CS-VSS  
7000 HP, 6600 volt, 6 pole, Reactor Coolant Pump Motor

**III. ANALYSIS OF THE EVENT****A. SAFETY SYSTEM RESPONSES THAT OCCURRED**

The Reactor Protection System and the Auxiliary Feedwater System actuated as expected during the event. Both Motor Driven Auxiliary Feedwater pumps and the Turbine Driven Auxiliary Feedwater pump automatically started as expected based on Lo-Lo level in 2 of 4 Steam Generators. All control rods fully inserted and the plant response to the automatic trip was as expected.

**B. DURATION OF SAFETY SYSTEM TRAIN INOPERABILITY**

Not applicable – No safety system was rendered inoperable.

**LICENSEE EVENT REPORT (LER)**

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NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

**C. SAFETY CONSEQUENCES AND IMPLICATIONS**

This event is specifically bounded by the accident analysis of the partial loss of forced reactor coolant flow discussed in Section 15.3.1 of the CPSES Final Safety Analysis Report (FSAR). The partial loss of forced reactor coolant flow is classified as an ANS Condition II event, a fault of moderate frequency. In the July 9, 2003 event, the Auxiliary Feedwater System responded as expected and maintained the necessary Steam Generator heat transfer capability. There were no other malfunctions or equipment failures which complicated the plant response or otherwise elevated risk beyond the event analysis data. There were no safety system functional failures associated with this event. Based on this analysis, it was concluded that this event did not adversely affect the safe operation of CPSES Unit 2 or the health and safety of the public.

**IV. CAUSE OF THE EVENT**

TXU Energy believes that the cause of the event was the opening of the 2-04 RCP motor breaker due to a "B" phase stator to ground short in the 2-04 RCP motor. The "B" phase stator to ground short occurred in the 2-04 RCP motor due to degradation of the stator ground wall insulation.

**V. CORRECTIVE ACTIONS**

Corrective actions include repair of the 2-04 RCP motor stator and, as previously discussed in Licensee Event Report 03-002-00 for CPSES Unit 1, an evaluation of the Predictive Analysis Program specifically for large electric motors will be performed to assess the current program scope, monitoring practices, and overall effectiveness.

**VI. PREVIOUS SIMILAR EVENTS**

In 1996, CPSES Unit 2 experienced a reactor trip due to the loss of a Reactor Coolant Pump (see LER 446/96-007). However, the Reactor Coolant Pump loss during the 1996 event was due to the loss of the power supply, which was different than the July 9, 2003 event.